

KATHMANDU UNIVERSITY
End Semester Examination
August/September, 2017

Mark scored:

Level : B. E.

Year : III

Course : GEOM 319

Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date

SEP 13 2017

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Choose the most appropriate option among the given choices.

1. What is stored in the object *emp* in the following line of code?
Employee emp;
a) Memory address of allocated memory of object b) NULL
c) Any arbitrary pointer d) Garbage
2. Which of these is correct about passing an argument by call-by-value?
a) Copy of argument is made into the formal parameter of the subroutine.
b) Reference to original argument is passed to formal parameter of the subroutine.
c) Copy of argument is made into the formal parameter of the subroutine and changes made on parameters of subroutine have effect on original argument.
d) Reference to original argument is passed to formal parameter of the subroutine and changes made on parameters of subroutine have effect on original argument.
3. Which of the following is correct way of importing an entire package 'pkg'?
a) import pkg. b) import pkg. c) import pkg.* d) Import pkg.*
4. Which of the following is incorrect statement about packages?
a) Package defines a namespace in which the classes are stored.
b) A package can contain other packages within it.
c) Java uses file system directories to store packages.
d) A package can be renamed without renaming the directory in which the classes are stored.
5. What is the output of this program?

```
package pkg;
class output {
public static void main(String args[])
{
StringBuffer s1 = new StringBuffer("Hello");
s1.setCharAt(1, 'x');
System.out.println(s1);
}
}
```


a) xello b) xxxxx c) Hxlllo d) Error
6. Which of these keywords is used to refer to member of base class from a sub class?
a) Upper b) super c) this d) inherits
7. Which of these operators can be used to get run time information about an object?
a) getInfo b) info c) getinfoof d) instanceof

8. Which of these is correct way of calling a constructor having no parameters, of superclass A by subclass B?
 a) super(void); b) superclass.B(); c) super.A(); d) super();
9. What will s2 contain after following lines of code?

```
StringBuffer s1 = "one";
StringBuffer s2 = s1.append("two")
```

 a) one b) two c) onetwo d) twoone
10. What is an event in delegation event model used by Java programming language?
 a) An event is an object that describes a state change in a source.
 b) An event is an object that describes a state change in processing.
 c) An event is an object that describes any change by the user and system.
 d) An event is a class used for defining object, to create events.
11. Which of these methods will be invoked if a character is entered?
 a) keyPressed() b) keyReleased() c) keyTyped() d) keyEntered()
12. Which of these methods is defined in MouseMotionAdapter class?
 a) mouseDragged() b) mousePressed() c) mouseReleased() d) mouseClicked()
13. Which of these keywords is used to by the calling function to guard against the exception that is thrown by called function?
 a) try b) throw c) throws d) catch
14. Which of these keywords must be used to monitor for exceptions?
 a) try b) finally c) throw d) catch
15. What will happen if the following code block is compiled/run?

```
int[] iArray = new int[10];
iArray.length = 15;
System.out.println(iArray.length);
```

 a) Prints 10 b) Prints 15 c) Compilation Error d) Run Time Error
16. What is the output of the following program?

```
class MyMethod
{
  static int func( inti)
  {
    return ++i;
  }
  public static void main(String[] args)
  {
    inti=0;
    int j=func(i++) + i + func(++i);
    System.out.println(i + " " + j);
    // System.out.println(j);
  }
}
```

 a) 5 2 b) 2 5 c) 2 6 d) 2 4

17. What is the output of this program?

```
class evaluate {  
    public static void main(String args[])  
    {  
        intarr[] = new int[] {0, 1, 2, 3, 4, 5, 6, 7, 8, 9};  
        int n = 6;  
        n = arr[arr[n] / 2];  
        System.out.println(arr[n] / 2);  
    }  
}
```

- a) 3 b) 0 c) 6 d) 1

18. What is the message displayed in the applet made by this program?

```
import java.awt.*;  
import java.applet.*;  
public class myapplet extends Applet {  
    public void paint(Graphics g) {  
        g.drawString("A Simple Applet", 20, 20);  
    }  
}
```

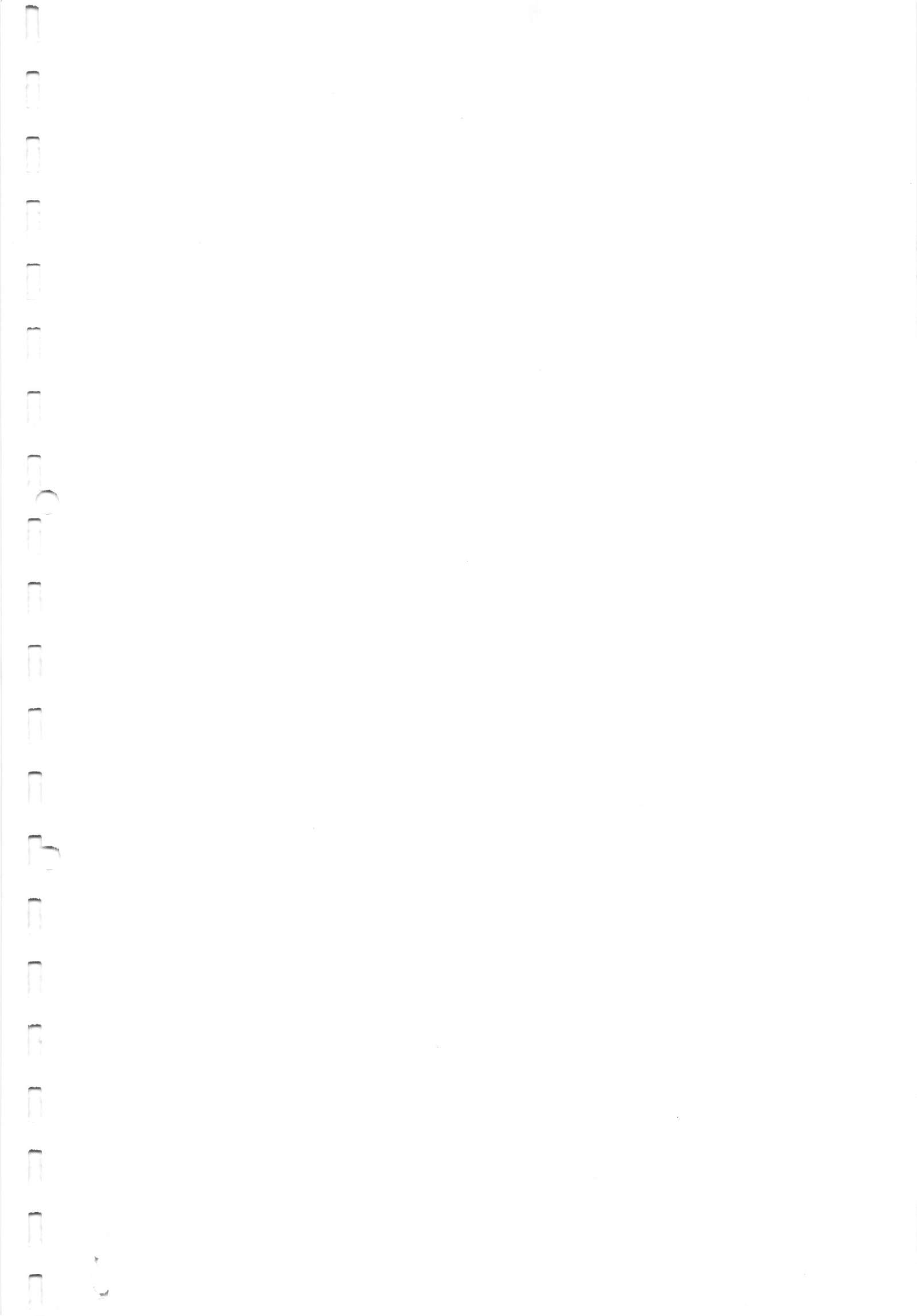
- a) A Simple Applet b) A Simple Applet 20 20
c) Compilation Error d) Runtime Error

19. How can you execute DML statements (i.e. insert, delete, update) in the database?

- a) By making use of the InsertStatement, DeleteStatement or UpdateStatement classes
b) By invoking the execute() or executeUpdate() methods of a normal statement object or a sub-interface object thereof
c) By invoking the executeInsert(), executeDelete() or executeUpdate() methods of the DataModificationStatement object
d) By making use of the execute() statement of the DataModificationStatement object

20. Which of the following is not inherited from *Container* class?

- a) Window b) JFrame c) JComponent d) Component



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SECTION "B"

[6Q × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. Compare speed and complexity of C, C++ and Java programming languages. "Memory leak is no more." Justify this statement for Java. [2 + 2]
2. Write a Java program that reads name, roll no and age of 30 students. Your program should also display the information at the end of the program. [4]
3. Are interfaces a necessity given that Java has abstract classes? Illustrate with an example program. [4]
4. Describe the use of *this* and *super* key words with example Java codes. [4]
5. Explain the benefits of final methods. Illustrate method overriding with Java code snippet. [2 + 2]
6. Is order of catch blocks important? Explain with an example Java program. [2 + 2]
7. Write short notes on: [2+2]
 - a. Applet lifecycle
 - b. Displaying texts with different fonts

SECTION "C"

[2Q × 8 = 16 marks]

Attempt *ALL* questions.

8. Write a Java program that draws road center lines. The program should ask the user for the coordinates of nodes of the roads as well as its name. When a road segment is clicked by left button of the mouse, the program should display the name of the road (e.g. Araniko Highway). [3 + 5]
9. When are inner classes useful? Write a java program that creates a table to store information of health camps in operation across the country. The program should get the information from user and store them in the table. The camp has a unique ID, location, number of doctors, nurses and amount of medicine etc. [2 + 6]

OR

Write a Java program that displays different shapes. Write an applet that shows information on 'principle of levelling'. [4 + 4]

